

Long-term outcomes of Descemet membrane endothelial keratoplasty in eyes with prior glaucoma surgery.

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Public Summary:

The purpose of this study is to evaluate the long-term outcomes of Descemet membrane endothelial keratoplasty (DMEK) in eyes with prior glaucoma surgery. DMEK is a partial-thickness corneal transplantation of one of the membranes called endothelium. Glaucoma is a disease characterized by the damage of the optic nerve. In this retrospective study, DMEK achieved good long-term visual outcome but higher rate of graft failure.

Scientific Abstract:

PURPOSE: To evaluate the long-term outcomes of Descemet membrane endothelial keratoplasty (DMEK) in eyes with prior trabeculectomy and/or drainage device. **DESIGN:** Retrospective, noncomparative case series. **METHODS:** Medical records of 251 consecutive DMEK procedures performed by 1 surgeon (SXD) from 2013 to 2017 were reviewed. Patients with ≥ 2 years follow-up were divided into 3 groups: eyes with prior glaucoma surgery (ST), eyes with medically treated with glaucoma (MT) and eyes without glaucoma (NG). Main outcome measures were visual acuity, endothelial cell count (ECC), rates of secondary graft failure (SGF) and postoperative complications. **RESULTS:** Ninety procedures (87 eyes) met the inclusion criteria. The mean follow-up period of all eyes was 38.4 ± 11.2 months (range, 24.2 to 64.4 months). At last follow-up, the proportion of eyes reaching a vision of $\geq 20/40$ was higher than that before the DMEK procedure in each group (all $P < .05$). The rate of ECC loss was the highest in the ST group compared to that in the MT and NG groups (63.8% vs 47.6% vs 44.0% respectively; $P < .05$) as well as the rate of SGF (41.6% vs 0% vs 2.4%, respectively; $P < .05$). The rate of SGF of repeat DMEK was higher than that of primary DMEK ($P < .05$). The rates of postoperative complications were similar among all groups (all $P > .05$). **CONCLUSION:** In eyes with prior glaucoma surgery, DMEK achieved good long-term visual outcomes, but experienced a higher rate of SGF than eyes without such comorbidity.

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